

Modern Economics

Fourth Edition

J. Harvey and M. K. Johnson



Study Guide and Workbook

MODERN ECONOMICS

Study Guide and Workbook

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FOURTH EDITION

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MACMILLAN

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PREFACE TO THE FOURTH EDITION

Economics cannot be learned parrot-fashion. It has to be thought about and understood. This Study Guide and Workbook has been compiled to encourage thinking and develop understanding. While it has been designed particularly to accompany *Modern Economics*, Fourth Edition, by J. Harvey (Macmillan), it can be used with similar texts. This fourth edition incorporates recent developments and updates facts.

Only after a quick reading of the relevant topics in a textbook should the student turn to the Study Guide. This will indicate the important points upon which he should concentrate his more detailed study. This same process of emphasising essentials is continued in the Workbook.

The Workbook comprises two main sections: (1) questions; (2) past examination questions set by the various professional bodies.

The questions have been designed: (a) to emphasise definitions and important points; (b) to test the student's understanding of the text; (c) to ensure that the student thinks about the ideas expounded; (d) to encourage the student to provide his own examples; (e) to show how economic theory is applicable to the practical decisions of the firm and the government. They consist of straightforward, short-answer questions, simple arithmetical exercises illustrating the application of principles, completion sentences, and 'true or false' and multiple choice questions. The latter are included to give practice in answering this type of question, but they have been kept few in number on account of the amount of space they require. Instructions are not repeated. The student is simply required to select the statement which seems to be correct or most nearly correct.

Past examination questions have been selected from recent professional examinations, but G.C.E. 'A' level and O.N.C. and H.N.C. questions are on similar lines. The object has been to choose questions which provide a stimulating topic for class discussion. Thus stock questions, covered directly by the textbook and which, in various forms, are common to all the examining boards, have largely been omitted.

The authors would like to thank the Councils of the following bodies for permission to reproduce questions from past examinations:

	Code
The Institute of Bankers	IB
The London Chamber of Commerce and Industry	LCCI
The Institute of Commerce	IC
The Institute of Health Service Administrators	IHSA
The Institute of Cost and Management Accountants	ICMA
The Royal Society of Arts	RSA
The Chartered Institute of Transport	IT
The Royal Institution of Chartered Surveyors	RICS
The Institute of Quantity Surveyors	IQS
The Incorporated Society of Valuers and Auctioneers	ISVA
The Institute of Chartered Accountants in England and Wales	CA
The Association of Certified and Corporate Accountants	ACCA
The Institute of Municipal Treasurers and Accountants	IMTA
The Local Government Training Board	LGTB
The Society of Company and Commercial Accountants	SCCA

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1 WHAT ECONOMICS IS ABOUT

Study guide

Economics is concerned with:

scarce resources → *alternative uses* → *choice* to achieve *given ends*.

It seeks to derive principles which will act as a guide when economic decisions have to be made.

This book concentrates mainly on one system of organising economic decision-making – the *price* system. By studying how this system works, we can see how it can be improved, understand current economic problems and predict the consequences of a particular economic decision. It is this application of economic principles to his professional work which should provide a major interest in the subject to the student.

The economist adopts scientific methods. This means that he must accept ends as given – he is concerned only with what *is*, not with what *ought* to be. There are only economic or non-economic methods of achieving those given ends.

Since resources are scarce, employing them in one use means that the opportunity of using them in some other use is lost. Thus we have a most important concept – *opportunity cost* – the cost of something in terms of alternatives forgone. As we shall see, this is *the* cost which lies at the root of economic decision-making; it need not be identical to money cost or even to the cost to an individual. The concept will be given greater precision in subsequent chapters.

Questions

1. What is the opportunity cost of a free good?
2. Why cannot the government solve the U.K.'s economic problem simply by printing more money and distributing it to the population?
3. Which of the following are non-economic goods, and why?
 - (a) beer
 - (b) hedge-trimmings
 - (c) a second-hand car
 - (d) a derelict car
 - (e) sand in the Sahara
 - (f) sand in a builders' merchant's yard
 - (g) a G.C.E. certificate
4. What, in the last resort, has a millionaire to economise in?
5. My income in 1976 was £2,000; today it is £8,000. Over the same period the goods on which I spend my income have doubled in price. Use these facts to distinguish between 'money income' and 'real income' and to explain why my standard of living has not quadrupled over this period.
6. A man has an income of £40 per week. Assume that he spends all this income, buying two goods *X* and *Y* which cost £2 and £5 respectively per unit.
 - (a) Complete the following table, which shows some of the possible combinations of *X* and *Y* which he can purchase:

units of <i>X</i>	0	5	?	15	?
units of <i>Y</i>	?	?	4	?	0
 - (b) Plot the points on a graph, units of *X* along the horizontal axis and units of *Y* up the vertical axis. What do you notice about the points?
 - (c) Complete: 'From the graph, it can be seen that an extra unit of *Y* always costs the man. . . .units of *X*'; or, alternatively an extra unit of *X* always costs him. . . .units of *Y*.'
 - (d) The costs referred to in (c) are money costs/opportunity costs/taxes. Which?
 - (e) What would happen to the graph if the man's money income doubled while the prices of *X* and *Y* also doubled?
 - (f) What can you say about the man's real income in (e), as distinct from his money income?
 - (g) What happens to the graph if the man's money income doubles while the prices of *X* and *Y* remain the same?
 - (h) In the original situation, where the man has £40 per week, the price of *Y* doubles. Draw the new graph, and state what has happened to the man's real income.
7. Which of the following statements are factual (positive) and which are value judgements (normative)?
 - (a) The national income of the U.K. in 1982 was £201,073m.
 - (b) The U.K.'s national income increased from £50,139m. in 1972 to £201,073m. in 1982.
 - (c) The U.K.'s national income in 1982 should have been much higher than it was.

8. The following headings form the stages of the usual scientific approach to a problem. Rearrange them in the correct order.
- form a hypothesis about the relationship of x to y ;
 - make observations about two variables, x and y , including any simplifying assumptions;
 - use the hypothetical relationship to make predictions about the effect on y of a particular change in x ;
 - alter the hypothesis, if necessary, on the results of the experiment;
 - carry out experiments if possible, or collect more observations to verify or refute the prediction;
 - if the hypothesis appears to be the correct one, continue to make observations in case these prove the hypothesis to be wrong or insufficiently precise.

Multiple choice

9. The following are certain characteristics of human existence:

- the wants of human beings are unlimited;
- wants are of varying importance;
- the means available for achieving those wants are limited;
- the means can be used in different ways.

Which of these characteristics must be found together for an economic problem to arise?

- i, iii and iv only;
- i and iii only;
- i, ii, iii and iv;
- ii and iii only.

10. The following are possible characteristics of a good:

- it is desirable;
- the amount available is limited in relation to wants;
- it can be physically transferred from one place to another;
- it can be transferred from one person to another.

Which of these characteristics must be found together for it to be an 'economic good'?

- i, ii, iii and iv;
- i and ii only;
- i, ii and iii only;
- i, ii and iv only.

True or false?

11.
 - The economic problem arises because resources are scarce relative to our wants.
 - An economic good is one which can only be obtained by giving something in exchange for it.
 - All goods which are useful are economic goods.
 - There is an economic problem in India but not in the U.S.A.
 - Scarcity in the U.K. is due to the inequality of incomes.
 - The opportunity cost of having one good is the best alternative which has to be forgone.
 - The nature of economic phenomena is such that the economist cannot pursue his studies by scientific methods.
 - As a scientist, the economist is concerned solely with what *is*, not with what *ought* to be.

Past examination questions

- 'Scarcity is the most fundamental characteristic of an economic problem.' Explain this statement and give an example which illustrates its meaning. (LCCI)
- 'Economics is concerned with the problem of allocation.' Discuss. (IHSA)
- Give a definition of economics. Why do economists sometimes disagree with each other on matters of interpretation? (IB)
- 'The assumption that man behaves in a rational manner is fundamental to the laws of economics. Discuss this statement. (RSA)
- What do you understand by an economic law? Give three examples of such laws. (RSA)
- 'Every decision has its economic aspects and implications.' Discuss. (IC)

2 METHODS OF ALLOCATING ECONOMIC RESOURCES, ETC.

Study guide

Scarcity of resources means:

- (1) Not all the goods we want can be produced; we therefore have to decide *what goods?*
- (2) We have to use our limited resources as efficiently as possible; we therefore have to decide *how?*
- (3) There will be a limited amount of goods to go round amongst everybody who wants them; we therefore have to decide how they shall be distributed – *for whom?*

Broadly speaking, there are two methods by which these questions can be answered – the state or the price system. Although our study is largely concerned with the latter, it will show that on occasions interference by the state can improve efficiency. For example, private decision-making only takes into account private costs. But private costs may differ from opportunity cost because public costs should also be taken into account. For example, street-parking may be costless to the individual but incur a public cost in traffic congestion, accidents, etc. The state can allow for this by charging for parking, thereby bringing money costs into line with opportunity cost.

For these, and other reasons, all systems contain some state interference, but the actual degree to which private persons are allowed to make decisions is a political rather than an economic issue. Read through, but do not try to understand fully, the reasons for state interference at the end of the chapter. They are developed later.

You can treat the section on micro- and macro-economics similarly. The distinction between the two – which is basically one of method – will be much clearer at the end of the course. Remember, however, that micro- and macro-economics are inter-related. For instance, spending as a whole consists of all the various items of spending by individuals in the different markets.

Above all, note that economic theory is concerned with developing two basic models:

- (1) demand, supply and price in individual markets;
- (2) the circular flow of income.

If you keep this in mind, it will be easier for you to appreciate how all the different bits of theory fit together.

This chapter introduces the concept of a *flow* – a *rate of movement over time*. In contrast to this, we can have a *stock* – the quantity in existence at a *particular moment* of time. In economic analysis we work chiefly in flows. Consider a micro-economic example, such as the market for potatoes. There are two flows – the quantity demanded per week and the quantity supplied per week. As we shall see in Chapter 3, these two flows are brought into equilibrium by the price mechanism. If, for instance, consumers decided to buy more potatoes each week, the increase in the rate of the flow of potatoes off the market would have the immediate effect of reducing the stocks held by potato merchants. The result – a rise in price, as merchants react to prevent their stocks running out too fast.

Questions

1. Give the chief reasons for the following government intervention in the economy of the U.K.:

- (a) rent control;
- (b) a prices and incomes policy;
- (c) the tax on oil;
- (d) restrictions on the export abroad of private capital;
- (e) subsidies to agriculture;
- (f) control of the sale of drugs and alcohol;
- (g) the prevention of the merger of Barclays and Lloyds Banks;
- (h) the imposition of a capital gains tax.

2. Classify the following economic concepts as stocks or flows:

- (a) a man's income;
- (b) a man's wealth;
- (c) the U.K.'s gold and foreign currency reserves;
- (d) the national income of the U.K.;
- (e) the U.K.'s population;
- (f) immigration into the U.K. and emigration from the U.K.

3. Complete:

- (a) If the rate of flow of production equals the rate of flow of consumption, stocks will
- (b) If the rate of flow of consumption the rate of flow of production, stocks will decrease.
- (c) If the rate of flow of production the rate of flow of consumption, stocks will increase.

4. If the U.K.'s exports are less in value than her imports, what tends to happen to the gold and foreign currency reserves, given fixed exchange rates and no change in overseas borrowing or lending?
5. If the demand for mortgages exceeds the supply of funds coming into building societies, how do the latter tend to react?
6. Which of the following are micro-concepts, and which macro-?
 - (a) the rent of an acre of land in Kent;
 - (b) the total income of landowners in the U.K.;
 - (c) the quantity of money in the U.K.;
 - (d) the quantity of money held by John Smith;
 - (e) the National Debt;
 - (f) the dividend paid by I.C.I. to its ordinary shareholders.

Multiple choice

7. In a money-using Capitalist society, the economic problem of 'what goods' shall be produced is solved primarily by:
 - (a) people advertising their wants;
 - (b) direction by the government;
 - (c) the pattern of consumers' spending;
 - (d) people producing directly to satisfy their own wants.
8. In a money-using Capitalist society, the economic problem of 'who shall receive the goods produced' is solved primarily by:
 - (a) distributing income according to the needs of individual consumers;
 - (b) rationing by the government;
 - (c) consumers bidding up the prices of those goods they are anxious to buy, and refusing to bid for those goods they do not want;
 - (d) firms bidding for factor services whose owners receive an income to buy goods.

True or false?

9.
 - (a) If a Central Planning committee decides what goods should be produced, society will always get the goods it wants.
 - (b) How goods are to be produced is a technological problem, not an economic one.
 - (c) The U.S.A. and the U.S.S.R. do not differ in the fundamental economic problems they have to face, but they differ in the ways they go about solving them.
 - (d) In a Capitalist system, the problem of what goods should be produced is decided entirely by businessmen.
 - (e) Both profits and losses are important in the operation of the price system.
 - (f) Intervention by the State in the free operation of the price system cannot be justified on grounds of economic efficiency.
 - (g) Economic planning by the government involves some sacrifice of individual freedom of choice.
 - (h) Whereas a stock represents the quantity of X in existence at a particular moment of time, a flow represents the rate at which the stock of X is increasing or decreasing per unit of time.

Past examination questions

1. It is agreed that resources are scarce in relation to wants and must therefore be allocated. Discuss the relative advantages of the various ways of allocating them. (RSA)
2. 'In a capitalistic system the consumer is king.' Explain and discuss this statement. (RSA)
3. How are the problems of scarcity and choice solved in a free enterprise system? (IB)
4. What are the main differences between the economic systems of Western countries and those of Communist states? Are there any similarities between them? (IQS)
5. Why, in a modern economy, is it necessary to interfere with the operation of the free price mechanism? (ICMA)
6. Do you consider that the services provided by a port should be in the hands of private enterprise or the port authority? Give reasons for your answer. (IT)
7. Outline the role of the government in a mixed enterprise economic system. Illustrate your answer with reference to the scope of the U.K. government sector as it is today. (LGTB)

3 HOW PRICE IS FORMED IN THE FREE MARKET

Study guide

This is one of the most important chapters in the book. Those sections dealing with demand, supply and price provide the basic tools for analysing all problems concerned with the allocation of resources between different uses. Look upon diagrams as an aid to analysis and a means of expressing ideas. Not until you use demand and supply diagrams instinctively when appropriate can you regard yourself as being fully competent in this branch of theory.

There are many different factors influencing the price of a good — price, income, tastes, the prices and productivity of factors producing it, etc. But they can all be aggregated under two headings: demand and supply. Curves are then drawn illustrating how demand and supply vary as *price* changes, all the other factors remaining unchanged. Taken separately, neither demand nor supply curves can tell you what the price will be in the market. They simply say: *if* the price is so much, *then* so much will be demanded or supplied.

Changes in factors other than price can be shown only by drawing a new demand or supply curve. You must then decide:

- (1) Is it a change in demand or a change in supply?
- (2) Does demand/supply decrease or increase at any given price? In the first case, the curve moves to the left; in the second, it moves to the right.

The importance of demand and supply analysis is in its application. Study carefully, therefore, the examples in this and the next chapter and think up some from your professional experience.

Questions

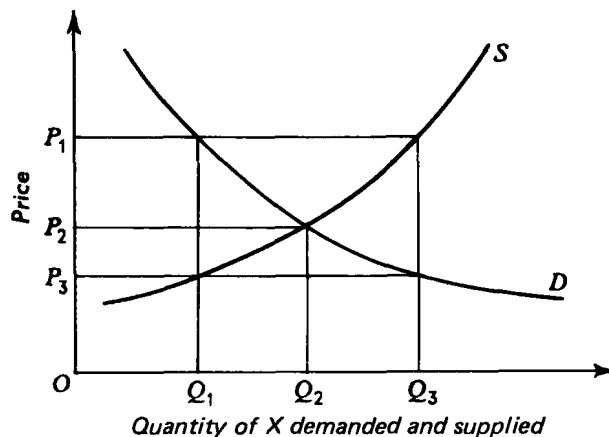
1. A newspaper costs 10p, a pound of bacon £1, and a bus ticket 40p.
 - (a) Express the value of each good in terms of the others.
 - (b) How many such 'prices' are there?
 - (c) How many prices are there when the value of each good is expressed in terms of money?
2. Wheat and bread are both widely demanded. Give three reasons why wheat has a world market, while bread has only a local market.
3. Classify the following markets as *imperfect* or *approximating to perfect*:
 - (a) the Stock Exchange,
 - (b) the second-hand book market,
 - (c) the foreign exchange market,
 - (d) the labour market,
 - (e) the retail paint market,
 - (f) the Discount Market,
 - (g) the commodity markets (wool, wheat, rubber, cotton, etc.)
4. Suggest three reasons for the imperfections of the markets in Question 3.
5. Why do improved communications help to remove market imperfections?
6. The following imaginary demand schedules for peas relate to three different income groups:

Price per lb. (pence)	Demand (thousand lb.)			Market
	Rich	Middle	Poor	
20	4	1	10	
18	6	2	10	
16	7	4	11	
14	8	8	14	
12	10	20	20	
10	11	39	100	
8	12	90	300	

Complete the market-demand schedule.

7. Why is it that a fall in the price of meat will have comparatively little effect on the demand for fish, whereas a fall in the price of beef will have a far greater effect on the demand for mutton?

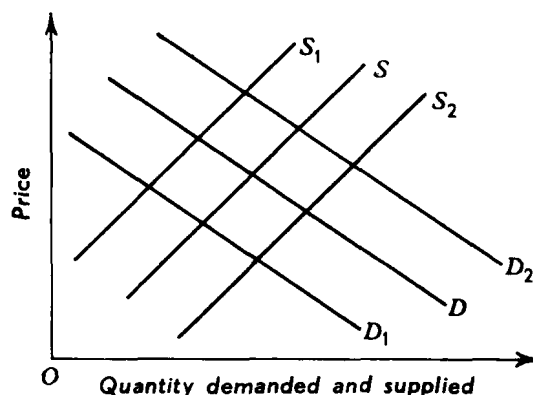
8. Why does a crisis in foreign affairs often increase demand for raw materials? Give 2 examples since 1945.
9. What financial event often affects the demand for goods some time beforehand? Why?
10. Give the reasons for rising costs of production since the war of (a) coal (b) houses in London.
11. Name four goods which are supplied at a lower price in the autumn than in the spring.
12. On the diagram:



- (a) What is the equilibrium price?
 - (b) What will be the effect on demand if the government fixes a maximum price of P_3 ?
 - (c) What will be the effect on supply if the government fixes a maximum price of P_3 ?
 - (d) What will be the effect on commodity X ?
13. In Question 12, how could the government use the price system in order to obtain an equilibrium price of P_3 and an equilibrium quantity of Q_3 ? Illustrate with a diagram.
 14. The demand and supply schedules for wheat in a free market are as follows:

tonnes demanded per week	425	500	550	600	650	675	700	725	750	800
tonnes supplied per week	1500	1000	750	600	500	400	300	225	150	100
price per tonne (£)	160	144	128	112	96	80	64	48	32	16

 - (a) What would be the equilibrium price?
 - (b) Suppose when the market opened for the day, wheat sellers set their price at £144 per tonne. What would be the effect upon wheat stocks, and the resulting reaction of sellers?
 - (c) Suppose that sellers instead began trading at £80 per tonne. What would be the effects in this case?
 - (d) With reference to your answer to part (a), complete the following sentence: 'This is the equilibrium price, provided that.'
 15. Suppose that demand in Question 14 now increases by 200 tonnes per week at all prices:
 - (a) What will be the effect upon wheat stocks if suppliers keep to the old equilibrium price?
 - (b) What will tend to happen to the market price?
 16. Given the increased demand of Question 15 as a permanent change (as far as farmers can foresee):
 - (a) What would you expect farmers' reactions to be when they are deciding what crops to sow for next year?
 - (b) What effect is this likely to have on next year's wheat price?
 17. On the diagram, D and S represent the original demand and supply curves for gas central heating appliances. Indicate the letter of the new curve which, other things being equal, would depict the following changes:

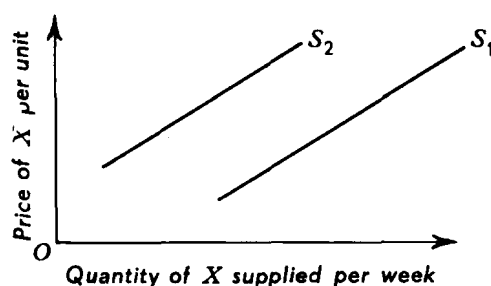


- (a) Firms within the industry co-operate to promote a successful advertising campaign.
- (b) A considerable fall in the price of electricity.
- (c) An increase in the productivity of workers producing the appliances.
- (d) A general increase in consumers' incomes.
- (e) A considerable increase in the cost of raw materials.
- (f) An improvement in the methods of production.
- (g) A considerable fall in the price of gas.
- (h) A rise in the prices of heating systems using other fuels.
- (i) A succession of very cold winters.

Multiple choice

18. Which of the following statements is correct or most nearly correct?
- (a) A commodity will have value if it is wanted by somebody.
 - (b) A commodity will have value only if it is scarce relative to demand.
 - (c) The value of a commodity depends upon its price.
 - (d) The value of a commodity is entirely dependent upon the demand for it.
19. Which of the following statements is correct or most nearly correct?
- (a) An increase in price of a commodity represents a fall in its value.
 - (b) Value has nothing to do with price.
 - (c) If the price of a commodity falls, its value relative to other goods does not alter.
 - (d) The price of a good is its value measured in terms of money.
20. Which of the following statements is correct or most nearly correct?
- (a) More of a commodity will usually be demanded at a higher price than at a lower price.
 - (b) More of a commodity will usually be supplied at a higher price than at a lower price.
 - (c) A change in the amount of a commodity supplied to the market is unlikely to affect its price.
 - (d) The demand for a commodity will not change unless its price changes.
21. In the typical demand schedule, quantity demanded:
- (a) varies directly with price;
 - (b) varies proportionately with price;
 - (c) varies inversely with price;
 - (d) is independent of price.
22. The supply schedule of commodity *X* shows:
- (a) the quantity of *X* which will be supplied at any given price;
 - (b) the total amount of *X* in existence at any time;
 - (c) the amount of *X* which is bought at the equilibrium price;
 - (d) the amount of *X* which will be put on the market at certain prices in a given period of time.

The following diagram applies to questions 23, 24, 25. It shows supply curves for different periods of time, 1 and 2.



23. The curve S_1 shows that:
- (a) more *X* is put on the market as the price falls;
 - (b) as less *X* is supplied, the price falls;
 - (c) more *X* is put on the market as the price rises;
 - (d) supply is independent of price.
24. The movement of the curve from S_1 to S_2 shows:
- (a) a decrease of supply at all relevant prices;
 - (b) a contraction of supply;
 - (c) supply greater in period 2 than in period 1;
 - (d) a condition of inelastic supply.

25. The shift of the curve from S_1 to S_2 could be caused by:
- a government subsidy to producers of X ;
 - an increase in the wage-rates paid to workers in industry X ;
 - improved techniques of production in X ;
 - a fall in the prices of raw materials used in manufacturing X .
26. Other things being equal, a decrease in the quantity supplied to the market at given prices leads to:
- a higher price;
 - a lower price;
 - a contraction of demand;
 - an expansion of demand.
- Which of the above alternatives is consistent with the statement?
- i and ii.
 - ii and iii.
 - i and iii.
 - i and iv.
27. An increase in the number of houses demanded at present prices is, other things being equal, likely to result from:
- an increase in the number of marriages;
 - a rise in real income;
 - a considerable rise in the rate of interest charged to borrowers by building societies;
 - a net fall in the population through emigration.
- Which of the above alternatives is consistent with the statement?
- i and ii;
 - i and iii;
 - i and iv;
 - ii and iv.
28. A stable equilibrium position is one in which:
- there are only two forces influencing equilibrium;
 - there are never any departures from the equilibrium position;
 - any departure from the equilibrium position calls into play forces which tend to restore that position;
 - there are endless oscillations.

True or false?

29. (a) Economic markets are physical places where tangible goods are bought and sold.
 (b) The demand schedule is an 'if' schedule in the sense that it shows the quantities that would be demanded at various prices over a given period of time if other factors affecting demand are constant.
 (c) The effect on demand of a fall in price is shown by a shift in the demand curve to the left.
 (d) Other things being equal, if the price of beef falls, the demand for mutton is likely to decrease.
 (e) Other things being equal, if the price of petrol falls, the demand for tyres is likely to increase.
 (f) A supply schedule shows that, under given conditions, the quantity supplied will be less at high prices, because at high prices it will not be possible to sell so much to buyers.
 (g) The equilibrium price is that price from which there will be no change provided the underlying conditions of demand and supply do not change.
 (h) An increase in the demand for houses is, other things being equal, likely to lead to an increase in bricklayers' earnings.
 (i) A supply schedule is meaningless unless referred to a given time period.

Past examination questions

- 'A market is a specific place where buyers and sellers meet.' Explain and discuss this statement. (RSA)
- What is a market? How does market speculation affect the price of goods? (RSA)
- How do the problems of marketing agricultural produce differ from those in other industries? How does the agricultural industry attempt to overcome its marketing problems? (RICS)
- What is the function of the open freight market? Comment on the feasibility of economists predicting future trends in the behaviour of freight rates on the open market. (IT)
- Examine the speculative dealing in organised markets and discuss the economic significance of such dealings. (RSA)

6. Differentiate between the factors which govern the demand for houses and those which govern the demand for apples. (IQS)
7. Discuss the nature of demand distinguishing clearly between joint demand, derived demand and composite demand. (RSA)
8. How is value determined? Give examples. (RSA)
9. What is the meaning of 'equilibrium price'? Draw up a demand schedule and a supply schedule and illustrate how the equilibrium price for a good is established. (IHSA)
10. State, giving your reasons, which of the following could *not* account for an increase in the price of a commodity:
 - (a) Demand increases and supply increases.
 - (b) Demand increases and supply decreases.
 - (c) Demand decreases and supply decreases.
 - (d) Demand decreases and supply increases. (LCCI)
11. It is said that the demand for wool not only affects the price of wool but also influences the demand for lamb and mutton. Explain and discuss this statement. (RSA)
12. Analyse the factors which determine the cost of office accommodation in the City of London. (SCCA)
13. Examine the effect on the price of sugar, in the short and long period, of a large and permanent increase in the demand for it. (LCCI)
14. Why do the prices of raw materials, both mineral and agricultural, tend to fluctuate to a considerable extent? (IC)
15. 'The price of beef rose and therefore the demand for beef fell.' 'The demand for beef rose and therefore the price of beef rose.' Comment on the use of the word 'demand' in the two statements. (LGTB)
16. Distinguish carefully between (a) extensions and contractions of demand and (b) increases and decreases of demand. What factors might cause these increases and decreases? (ICMA)

4 APPLICATIONS OF DEMAND AND SUPPLY ANALYSIS

Study guide

If you have understood the analysis of the previous chapter, you should have no difficulty in following these simple applications. But there are two important points that you should bear in mind:

- (1) The demand and supply curves shown are merely diagrams to explain the basic principles of how the price mechanism works. This means that we can go no further than drawing *implications* as regards policy. Until we know the *actual* position and shape of the curves, we can make no precise forecast of how much price will change for a given change in demand or supply, how much demand will exceed supply at a controlled price, etc. Usually such precision is difficult, indeed impossible, to achieve.
- (2) The extent to which the laws of price are effective in practice depends upon how far our original assumptions, chiefly keen competition and a perfect market, apply.

Questions

1. There is traffic congestion in the centre of Barthem City owing to persons parking cars. There is no off-street parking, and the Council decides it will introduce parking meters, charging just sufficient to fill the available spaces. It estimates that there are 1,600 such spaces and that the demand schedule for parking would be as follows:

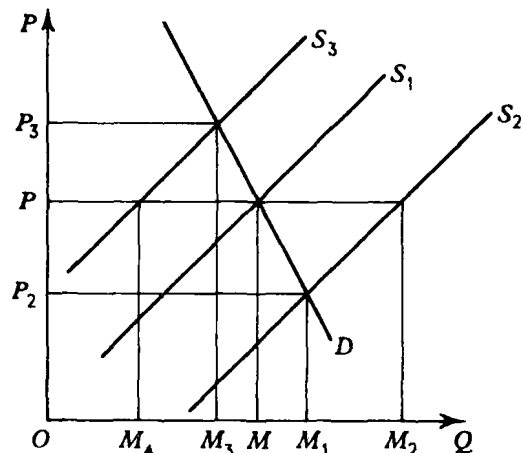
Price (pence)	Demand
30	500
25	900
20	1,600
15	2,400
10	3,400

What price does it charge?

2. If there is a shortage of petrol, and garages do not raise the price of petrol, what is the result?
3. Use demand-and-supply analysis to explain why Councils have such long waiting-lists for their flats.
4. Give the 2 main reasons why meat, eggs, butter, bacon, etc. were rationed by the government during the war.
5. Suppose real incomes in the U.K. rise appreciably. What would you expect to happen to the demand for: (a) cars, (b) food, (c) video recorders, (d) books, newspapers and magazines?
6. The following changes would affect the price of second-hand cars: (a) a sunny spring; (b) a substantial rise in railway fares; (c) large fall in price of new cars; (d) withdrawal of hire-purchase facilities; (e) much stricter tests for road-worthiness; (f) widespread unemployment in the country. Consider: (i) whether they represent a change in the conditions of demand or in the conditions of supply; (ii) whether they will produce an increase or decrease in the amount demanded or supplied.

Draw diagrams to illustrate how price changes.

7. On the diagram, it is assumed that the demand for wheat remains constant, but that the conditions of supply change from one period to another. S_1 is the supply curve for period 1, S_2 for period 2, and S_3 for period 3. The government has a stockpile by means of which it stabilises the price of wheat at OP a cwt.
 - i How much will the government have to add to or take away from its stockpile in: (a) period 1, (b) period 2, (c) period 3?
 - ii What will be the revenue of wheat farmers in: (d) period 1, (e) period 2, (f) period 3?



8. You are given the following information about the market for potatoes:

<i>Price</i> (pence per lb.)	<i>Amount demanded per week</i> (million lb.)	<i>Amount supplied per week</i> (million lb.)
9	30	62
8	35	60
7	41	57
6	45	53
5	49	49
4	53	45
3	57	41

- What would be the equilibrium market price?
 - What would be the effect of the government's fixing a maximum price of (i) 6p a lb.; (ii) 4p a lb.?
 - What would be the price if demand increased by 8 million lb. at all prices?
 - Going back to the original situation, suppose the government gave potato producers a subsidy of 2p per lb. What would be the new price?
 - Alternatively, suppose the government guaranteed potato producers a price of 6p per lb. How many lbs. would it have to take from producers?
 - How much would this cost it?
 - If it bought all the potatoes offered at 6p, at what single price would it have to dispose of them in order to clear the lot?
 - What then would be its net loss?
9. The supply of oranges decreases at all prices.
- Draw a diagram showing what you would expect to happen to the demand for oranges.
 - This change in demand is called.
 - Draw a second diagram showing the likely effect on the demand for apples.
 - This change in demand is called.
10. Which of the following are in joint demand (complements), competitive demand (substitutes), composite supply (can be employed in alternative uses), derived demand (the demand for one good is derived from the demand for the other), joint supply (the supply of one good is possible only by supplying the other)?
- bread and butter;
 - butter and margarine;
 - wheat and straw;
 - bread and potatoes;
 - wool, bricks, electricity;
 - fish and chips;
 - houses and bricks;
 - mutton and wool.
11. The supply of petrol increases at all prices. Draw diagrams to show the likely effect on the prices of petrol and cars in a free market, and give a short explanation.
12. If the price of apples falls, what is likely to happen to the price of pears?
13. In Central London, houses are used either as residences or offices. What will happen to rents if the demand for offices increases?
14. If the demand for houses increases, what is likely to happen to the price of bricks?
15. Complete:
- A* and *B* are substitutes. If the supply of *A* increases, the price of *B* will tend to.
 - A* and *B* are complements. If the supply of *A* decreases, the price of *B* will tend to.
16. People's tastes change from leather ties to knotted ties.
- Draw two diagrams to illustrate these changes.
 - What would you term these changes in demand?
 - Given the supply conditions for each good, what will be the effect on prices?

17. Commodity *X* has the following demand and supply schedules.

<i>Price of X</i> (£ per unit)	<i>Demand</i> (units per week)	<i>Supply</i> (units per week)
12	60	150
11	70	130
10	80	110
9	90	90
8	100	70

- (a) What is the equilibrium price?
 - (b) Show this diagrammatically.
 - (c) Suppose the government imposes a tax of £3 per unit of *X*. Show the new supply curve. (Note: producers will only supply the same amount at £3 more than originally.)
 - (d) How much now will be supplied at £12 and £11 (including tax)?
 - (e) What will be the new equilibrium price?
 - (f) How much has the price risen to the consumer?
 - (g) How much less per unit does the producer retain?
18. How could the government use the price mechanism to:
- (a) promote 'smokeless zones'?
 - (b) encourage goods to travel by rail rather than by road?
 - (c) influence people to build garages in order to take their cars off the streets at night?

Past examination questions

1. Explain why each of the following may be the cause of a rise in the price of houses:
 - (a) An increase in population.
 - (b) An increase in real incomes.
 - (c) A decrease in the rate of production of new houses.
 - (d) An increase in the wages of building workers. (LCCI)
2. What would be the likely effects on the price of advertising space in newspapers of (a) a rise in the demand for newspapers, (b) the introduction of a new T.V. channel, and (c) a rationing of the supply of newsprint? (IT)
3. In a market where price is freely determined by the forces of supply and demand, explain with the aid of diagrams what happens (a) to the price of bacon when the price of eggs rises due to seasonal scarcity; (b) to the price of mutton if the price of beef rises due to a rise in the cost of imported beef? (RICS)
4. Commodities *A* and *B* are in joint supply. Analyse the effect, in the short and long run, of an increase in the demand for *A* on the price of *B*. (LCCI)
5. The supply of houses is increasing but house prices are rising – does this contradict economic theory? (RICS)
6. Account for fluctuations in the price of coffee and discuss means by which they could be reduced. (LCCI)
7. Show how an increase in demand for basic tramp commodities may affect the level of liner freight rates. (IT)
8. Why do the prices of ordinary shares fluctuate more than the prices of manufactures? (IT)
9. Consider the case for instituting a national minimum wage. (IMTA)
10. What are your views on 'road pricing' as a means of reducing traffic congestion in towns? (IMTA)
11. What would be the effects of a rise in the price of leather hides on (a) the price of beef, (b) the price of shoes, (c) the price of plastic hand-bags, (d) the demand for mutton, and (e) the price of pig-skins? (IT)
12. Indicate the economic effects of fixing the rents at which unfurnished accommodation may be let below the levels which would be established in a free market. (RICS)
13. The supplies of a commodity are inadequate to meet normal demand. The government refuses to allow any rise of price but takes no further action. Explain, with the aid of a diagram, what you would expect to be the result. (SCCA)
14. What are the main reasons why farm incomes fluctuate? Indicate which are demand and which are supply influences. What measures do you think that the government might usefully take to stabilise farm incomes? (LGTB)